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IS 8126 (1993): composite office tables [CED 35: Furniture]

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( पहला पुनरीक्षण )

*Indian Standard*  
SPECIFICATION FOR  
COMPOSITE OFFICE TABLES  
( *First Revision* )

UDC 684.442 : 651.2

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BUREAU OF INDIAN STANDARDS  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

## FOREWORD

This Indian Standard ( First Revision ) was adopted by the Bureau of Indian Standards, after the draft finalized by the Furniture Sectional Committee had been approved by the Civil Engineering Division Council.

Composite furniture is made out of a combination of metal and wooden materials. There have been limitations on natural wooden furniture and furniture components like table tops to adopt to large scale factory production. With the development of panel board industry like particle boards, veneered particle boards, hardboards, medium density fibreboards and plywoods within the country; wood-based panels of standard and uniform quality in sheet form within close limits of tolerances have become available. This has fostered large scale factory production of wooden table tops for manufacture of composite tables.

Composite tables are widely used in offices. Therefore, it has become now necessary to formulate such standards correlating the materials available and standard sizes of table tops.

This standard was first published in 1976. In this revision, the following changes have been effected:

- a) Referred Indian Standards have been updated.
- b) Performance requirements of finish for steel components have been included.

The committee responsible for the formulation of this standard is given at Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 ' Rules for rounding off numerical values ( revised ) '. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*

**SPECIFICATION FOR  
COMPOSITE OFFICE TABLES**

*(First Revision)*

**1 SCOPE**

**1.1** This standard covers the requirements of materials, sizes, construction and finish of composite office tables.

**2 REFERENCE**

**2.1** The Indian Standards given in Annex A are necessary adjuncts to this standard.

**3 MATERIALS**

**3.1 Aluminium Sheets**

Aluminium sheets shall conform to alloy designation 31000, 52000, 31500 or 40800 in H2 condition of IS 737 : 1986.

**3.2 Aluminium Tubes**

Aluminium tubes shall conform to IS designation 62400, 63400 or 65032 of IS 1285 : 1975.

**3.3 Electrodes**

The welding electrodes for gas, arc and spot welding shall conform to IS 1278 : 1972, IS 814 : 1991 and IS 4972 : 1968 respectively.

**3.4 Mild Steel Sheets**

Mild steel sheets shall conform to Grade 0 of IS 513 : 1986 or Grade 0 of IS 1079 : 1988.

**3.5 Mild Steel Tubes**

Mild steel tubes shall conform to IS 7138 : 1973.

**3.6 Screws**

Screws shall conform to IS 1365 : 1978 or IS 6760 : 1972.

**3.7 Steel Wires**

Steel wire shall conform to IS 4454 (Part 1) : 1981.

**3.8 Wooden Table Tops**

Materials shall be as specified in IS 4414 : 1990.

**4 TYPES**

**4.1** Composite office tables shall be of the following two types:

- a) Table with single storage unit, and
- b) Table with double storage unit.

**5 DIMENSIONS AND TOLERANCES**

**5.1 Table Tops**

The overall dimensions of wooden table tops for composite office tables shall be as given in Table 1.

**Table 1 Overall Dimensions of Table Tops**

Sl No.	All dimensions in millimetres.		
	Length	Width	Thickness
(1)	(2)	(3)	(4)
i)	1 200	600	20
ii)	1 350	750	20
iii)	1 500	900	20
iv)	1 800	900	20

**5.2 Height**

The height of the composite office table shall be 710 mm  $\pm 10$  mm (see also IS 3663 : 1991).

**5.3** A tolerance of  $\pm 6$  mm on length and width and  $\pm 5$  percent in thickness shall be permitted.

**5.4 Knee-Space Dimensions**

**5.4.1 Knee-Space Width**

A minimum knee-space width of 560 mm clear of obstruction shall be provided.

**5.4.2 Knee-Space Height**

Knee-space height shall be made up of the height of the seat of the chair and the vertical clearance between the seat of the chair and underside of the table. The vertical clearance between the seat of the chair and the underside of the table shall be 230 mm minimum.

## 6 FABRICATION

### 6.1 Components

Composite office tables shall be assembled from the components as given in **6.2** to **6.17**.

### 6.2 Table Top

The wooden table tops used for composite office tables shall be of sizes as given in Table 1 and shall conform to IS 4414 : 1990.

**6.3** The wooden table tops shall be made from particle boards, block boards, medium density fibreboards or plywood and shall be lipped all round to cover the full thickness of tops with plastic beading or seasoned teak wood strips or decorative plastic laminate strips. The tops shall be overlayed either with decorative veneered

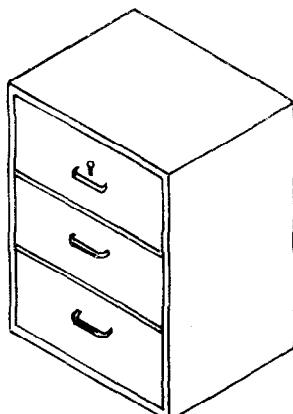
surface wax polished or of decorative plastic laminates or 'Epoxy' finished. The wooden frame shall be fitted with a steel frame at the bottom so as to fasten the top with the body pedestal and frame. The steel frame shall be made from mild steel sheet not less than 1 mm thick.

### 6.4 Storage Units

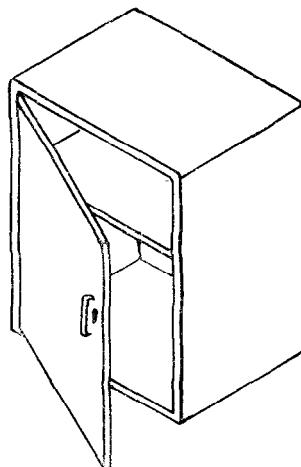
The storage units shall be of the following three types ( *see Fig. 1* ):

- a) Three-drawer unit,
- b) Locker unit, and
- c) Drawer and filing unit.

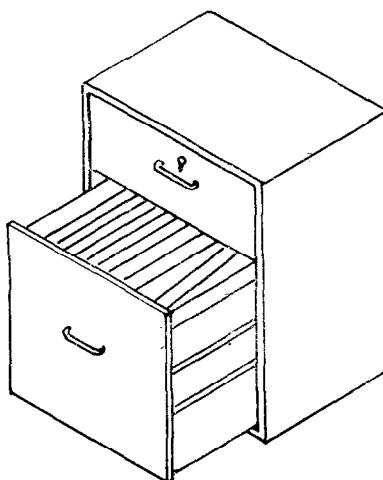
**6.4.1** Each storage unit shall be fittable to any table. First size of table top ( *see Table 1* ) shall



1A Three-Drawer Unit



1B Locker Unit



1C Drawer and Filing Unit

FIG. 1 TYPICAL STORAGE UNITS FOR COMPOSITE OFFICE TABLES

be used for tables with single storage unit; and second, third and fourth sizes of table tops shall be used for tables with double storage unit.

#### 6.4.2 Body for Storage Units

Body for storage unit shall be made from mild steel sheet not less than 0.8 mm thick. This shall be bent to box shape from one piece and tack welded at final overlapped corner or assembled with a maximum of two pieces properly welded depending upon the design. Lipped flanges shall be provided in the front and back portion and shall be bent inside to seat the back. The back shall be push fit and tack welded to the body.

#### 6.5 Drawers

The drawers shall be made from mild steel sheet not less than 0.63 mm thick and shall have a slot and a mild steel sheet strip at the rear for holding the drawer in the box when it is fully opened.

#### 6.6 Filing Unit

This shall be similarly made as drawer but shall be fitted with suspension cradle strips in pairs extending over the depth of drawer. The cradle strips shall be made from mild steel suitably finished or cladded with aluminium sheet not less than 0.8 mm thick.

#### 6.7 Drawer Guides

The drawers shall have either sheet angle guides or ball bearing type guides so that drawers shall move easily. The guide angles shall be made from mild steel sheet not less than 1.25 mm thick.

#### 6.8 Locker Door

Locker door shall be made from mild steel sheet not less than 0.8 mm thick and shall be properly stiffened. This shall have lipped flanges all around its sides. This shall be properly hinged and shall have a key slot in the front.

#### 6.9 Locker Shelf

The locker shelf shall be made from mild steel sheet not less than 0.8 mm thick and shall have lipped flanges on its front and rear sides. This shall be seated on the supports welded to box and shall be located in the centre of the inside height of box to make two equal compartments.

#### 6.10 Locking Mechanism

There shall be a suitable locking mechanism at the back side of drawers which shall so operate that all drawers in drawer unit and drawer-cum-filing unit shall be firmly locked, when the top drawer is closed. The top drawer shall be fitted with a lock.

#### 6.11 Foot Rest

The foot rest shall be minimum of 1.6 mm thick mild steel sheet or tubular pipe.

#### 6.12 Knee Cover

The double storage unit tables with square tubular pedestals shall be fitted with knee cover and shall be made from mild steel sheet not less than 0.8 mm thick.

#### 6.13 Pull-Out Slide

This is a slide with forward action. The pull-out slide shall be made from mild steel sheet not less than 1.0 mm thick and shall have flanges in the front and on sides.

#### 6.14 Tubular Pedestal

**6.14.1 Mild Steel Tubular Pedestal** — This shall be made from mild steel tubular pipes with a wall thickness of not less than 1.2 mm. The mild steel tubular pipe shall be either round or square in section with outside diameter/side not less than 25 mm.

**6.14.2 Aluminium Tubular Pedestal** — This shall be made from aluminium tubular pipe with a wall thickness of not less than 1.60 mm. The aluminium tubular pipe shall be either round or square in section with outside diameter/side not less than 25 mm.

#### 6.15 Handles

All drawers and locker door shall be fitted with a corrosion-resistant metal handle which shall be fixed to the front of drawer/locker door or a built-in pull mechanism.

#### 6.16 Lock

The lock used for drawers and locker door shall conform to IS 729 : 1979. The lock shall not be less than six lever lock with duplicate keys of non-corrosive material.

#### 6.17 Studs

Studs for tubular pedestals shall be made either from rubber or suitable plastic material.

### 7 ASSEMBLY

**7.1** The components shall be assembled by means of screwing, bolting or welding.

**7.2** The method of gas, arc and spot welding shall conform to IS 1323 : 1982, IS 816 : 1969 and IS 819 : 1957 respectively.

**7.3** Welding of aluminium parts shall be in accordance with IS 2812 : 1964.

## 8 FINISH

### 8.1 Steel Components

**8.1.1** All dents, burrs and sharp edges shall be removed from the various components and they shall be pickled, scrubbed and rinsed to remove grease, rust, scale or any other foreign elements.

**8.1.2** After pickling, all mild steel parts shall be given phosphating treatment in accordance with IS 3618 : 1966 followed by a coat of suitable primer, such as red oxide and zinc chromate.

NOTE — Putty shall be applied to all the surfaces requiring filling and shall conform to IS 110 : 1983. Aluminium primer shall conform to IS 5660 : 1970.

**8.1.3** Two coats of enamel paint shall then be applied as follows:

- Undercoat, conforming to IS 149 : 1950;
- Finish coat with enamels conforming to IS 151 : 1985, IS 2932 : 1974 or IS 2933 : 1975; and
- In case of stoving enamel the components shall thereafter be backed at a specified temperature in an oven heated uniformly. The finish shall be smooth and uniform with a hard and tough film of enamel strongly adhering to the surface. The finish shall be free from all visible defects and shall not chip when tapped lightly with a dull pointed instrument.

**8.2** Powder coating as specified in IS 13871 : 1993 may be done on the mild steel components if required by the purchaser.

### 8.3 Aluminium Components

Aluminium components may be anodized if required by the purchaser and shall conform to grade AC 25 of IS 1868 : 1968.

## 9 PERFORMANCE REQUIREMENT OF FINISH FOR STEEL

### 9.1 Hardness Test

Tests to be carried out as per 5 of IS 101 ( Part 5/Sec 1 ) : 1988.

### 9.2 Flexibility and Adhesion Test

Tests to be carried out as per 2 of IS 101 ( Part 5/Sec 2 ) : 1988.

### 9.3 Impact Resistance Test

Tests to be carried out as per IS 101 ( Part 5/Sec 3 ) : 1988.

### 9.4 Resistance to Humidity under Continuous Condensation

Tests to be carried out as per 2 of IS 101 ( Part 6/Sec 1 ) : 1988.

## 10 PACKING

**10.1** All the components shall be packed in such a way that no damage is caused to them during transit.

## 11 INFORMATION TO BE SUPPLIED BY THE PURCHASER

**11.1** The purchaser shall supply the following information to the supplier along with the order:

- Type and size of table top required,
- Type and number of storage units required,
- Type of tubular pedestal required,
- Colour of finish required, and
- Where alternative method of construction and finish are specified they shall be clearly stated in the order.

## 12 MARKING

**12.1** All metal tables and keys shall be marked with a suitable mark identifying the manufacturer. The keys shall bear the identification number and the locks shall have the same identification number as the keys.

**12.1.1** The composite office tables may also be marked with the Standard Mark.

## ANNEX A

( Clause 2.1 )

### LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
101 ( Part 5/Sec 1 ) : 1988	Methods of sampling and test for paints, varnishes and related products: Part 5 Mechanical test on paint, Section 1 Hardness tests ( third revision )	101 ( Part 5/Sec 2 ) : 1988	Methods of sampling and test for paints, varnishes and related products: Part 5 Mechanical test on paint, Section 2 Flexibility and adhesion tests ( third revision )

IS No.	Title	IS No.	Title
101	Methods of sampling and test ( Part 5/Sec 3 ) : for paints, varnishes and related products: Part 5 Mechanical test on paint, Section 3 Impact resistance ( falling ball test ) ( third revision )	1285 : 1975	Wrought aluminium and aluminium alloy extruded round tube and hollow sections ( for general engineering purposes ) ( second revision )
101	Methods of sampling and test ( Part 6/Sec 1 ) : for paints, varnishes and related products: Part 6 Durability tests, Section 1 Resistance to humidity under conditions of condensation	1323 : 1982	Code of practice for oxy-acetylene welding for structural work in mild steels ( second revision )
110 : 1983	Ready mixed paint, brushing, grey filler, for enamels for use over primers ( first revision )	1868 : 1968	Anodic coatings on aluminium and its alloys ( second revision )
149 : 1950	Ready mixed paint, spraying, undercoating, stoving, for enamels and general purposes colour as required	2812 : 1964	Recommendations for manual tungsten inert gas arc welding of aluminium alloys
151 : 1985	Ready mixed paint, spraying, finishing, stoving, enamel, for general purposes, colour as required ( first revision )	2932 : 1974	Enamel, synthetic, exterior (a) undercoating, (b) finishing ( first revision )
513 : 1986	Cold-rolled low carbon steel sheets and strips ( third revision )	3663 : 1991	Dimensions of tables and chairs for general office purposes ( second revision )
729 : 1979	Specification for drawer locks, cupboard locks and box locks ( third revision )	3618 : 1966	Phosphate treatment of iron and steel for protection against corrosion
737 : 1986	Wrought aluminium and aluminium alloy plate for general engineering purposes ( third revision )	4414 : 1990	Specification for wooden table tops ( second revision )
814 : 1991	Covered electrodes for metal arc welding of carbon and carbon manganese steel	4454 ( Part 1 ) : 1981	Steel wires for cold formed springs: Part 1 Patented and cold drawn steel wires-unallloyed ( second revision )
816 : 1969	Code of practice for use of metal arc welding for general construction in mild steel ( first revision )	4972 : 1968	Resistance spot welding electrodes
819 : 1957	Code of practice for resistance spot welding for light assemblies in mild steel	5660 : 1970	Ready mixed paint, brushing, aluminium red oxide primer
1079 : 1988	Hot rolled carbon steel sheet and strip ( fourth revision )	6760 : 1972	Slotted countersunk head wood screws
1278 : 1972	Filler rods and wires for gas welding ( second revision )	7138 : 1973	Steel tubes for furniture purposes
		13871 : 1993	Specification for powder coating

## ANNEX B

( *Foreword* )

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( *Continued on page 7* )

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SHRI H. K. RAKHRA

SHRI TILAK RAJ ( *Alternate* )

*Representing*

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New Delhi

Small Scale Steel Furniture Manufacturers Association ( Regd ),  
New Delhi

National Institute of Design, Ahmadabad

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards Monthly Additions'. Comments on this Indian Standard may be sent to BIS giving the following reference:

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## **Amendments Issued Since Publication**

Amend No.	Date of Issue	Text Affected

## BUREAU OF INDIAN STANDARDS

**Headquarters:**

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002  
Telephones : 331 01 31, 331 13 75

**Telegrams : Manaksantha  
( Common to all offices )**

## Regional Offices:

### Telephone

**Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg  
NEW DELHI 110002**

{ 331 01 31  
331 13 75

**Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola  
CALCUTTA 700054**

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Northern SCO 445-446, Sector 35-C, CHANDIGARH 160036

{ 53 38 43, 53 16 40  
 { 53 23 84

Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113

{ 235 02 16, 235 04 42  
235 15 19 235 22 15

**Western & Manakalaya, E9 MIDC, Marol, Andheri ( East )  
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